

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 15 JUN 2006

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Applicant's or agent's file reference R675-PCT	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/JP2005/004717	International filing date (day/month/year) 10.03.2005	Priority date (day/month/year) 10.03.2004
International Patent Classification (IPC) or national classification and IPC INV. A01N51/00 A01N47/40		
Applicant SYNGENTA PARTICIPATIONS AG et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 1 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 09.01.2006	Date of completion of this report 14.06.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Molina de Alba, J Telephone No. +49 89 2399-7823 	

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-13 as originally filed

Claims, Numbers

1-5 received on 12.01.2006 with letter of 09.01.2006

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☒ the claims, Nos. 1
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
☒ claims Nos. 1

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
☒ the claims, or said claims Nos. 1 are so inadequately supported by the description that no meaningful opinion could be formed (*specify*).

see separate sheet

- ☐ no international search report has been established for the said claims Nos.
☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:
☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13*ter*.1(a) or (b) and 13*ter*.2.
☐ a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions, and such tables were not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
☐ the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
☒ See separate sheet for further details

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-5
	No: Claims	
Inventive step (IS)	Yes: Claims	2-5
	No: Claims	
Industrial applicability (IA)	Yes: Claims	2-5
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

1) Reference is made to the following documents:

- D1:** DATABASE BIOSIS [Online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; September 2000 (2000-09), KIM CHUL-SU ET AL: "Chemical control of sycamore lace bug, *Corythucha ciliata*(Say)" XP002337398 Database accession no. PREV200100008306
- D2:** DATABASE BIOSIS [Online] BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; August 2002 (2002-08), GROSMAN DONALD M ET AL: "Systemic insecticide injections for control of cone and seed insects in loblolly pine seed orchards: 2 year results" XP002337399 Database accession no. PREV200200624075

2) Re Item I and III

The amendments filed by the Applicant with letter of 09.01.2006 do not fulfil the requirements of Art. 34(2)(b) PCT in that amended Claim 1 extends beyond the content of the application as filed. The reason therefor is that the passage on pg. 5, l. 8-17 of the original application (passage on which the instant Claim 1 is based) contains restrictions as regarding the solubility of the neonicotinoid-based insecticide, which are not present in amended Claim 1. The scope of Claim 1 encompasses thus subject-matter which was not disclosed in the application as originally filed. This objection also applies to the dependent claims 4 and 5.

As Claim 1 and its dependent claims 4 and 5 are not allowable under Art. 34(2)(b), the following substantive examination of the application has been based on the amended set of 4 claims which would result from deleting Claim 1 and rendering amended Claim 2 the independent claim. This set of claims is allowable since Claim 2 is supported by the passage in the original description on pg. 5, l. 8-17 in combination with original Claim 1 and the examples.

The present examination is thus based on a method for obtaining lumber that does not require termite-proofing treatment following to production of lumber, said method comprising injecting into the trunk of a tree a preparation comprising: a neonicotinoid-based insecticide selected from thiamethoxam, clothianidin, dinotefuran, and acetamiprid; at least one solvent miscible with water; and at least one surfactant.

3) Re Item V

3.1 Novelty (Art. 33(2) PCT)

None of the documents cited relate to a method of obtaining lumber which does not require a termite-proofing treatment following to lumber production. The methods of amended claims 2 to 5 are thus novel over the prior art.

3.2 Inventive Step (Art. 33(3) PCT)

Documents **D2** and **D3**, which relate to the treatment of trees by injection with compositions comprising at least one neonicotinoid insecticide, are regarded as the closest prior art.

The presently claimed methods differ from **D2** and **D3** in that they are not directed to the protection of living trees against insect attack, but to the obtention of lumber which does not need to be treated against insects, in particular termites. The Applicant has shown in Example 3 that the injection of a composition as in the application into the trunk of a tree effectively results in lumber which does not need to be treated against termites. The problem to be solved by the present application may thus be formulated as providing a method of obtention of lumber which does not require a termite-proofing treatment following to lumber production.

There is no suggestion in the cited documents, that the problem proposed may be solved by injecting a selected neonicotinoid composition into the trunk of the tree from which lumber is to be obtained. The subject-matter of claims 2 to 5 may thus be regarded as inventive.

3.3 Industrial applicability (Art. 33(4) PCT)

Is acknowledged for all the claims.

4) Re Item VIII

The feature "glycerins" in Claim 4 is not clear (Art. 6 PCT). Glycerin is a single and well-defined compound and its use in plural renders obscure the scope of the claim since it seems

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that the feature could encompass further compounds.

The relative term "lower" used in Claim 4 has no well-recognised meaning and leaves the reader in doubt as to the alcohols to which it refers (Art. 6 PCT).

Note also a typing error in acetamiprid (Claim 2).

CLAIMS

1. (new) A method for obtaining lumber that does not require termite-proofing treatment following lumber production, said method comprising injecting a tree trunk injection preparation comprising a neonicotinoid-based insecticide component, at least one solvent miscible in water and at least one surfactant into the trunk of a tree.

2. (amended) The method of claim 1, wherein the neonicotinoid-based insecticide is selected from the group consisting of thiamethoxam, acetamprid, dinotefuran and clothianidin or a mixture thereof.

3. (new) The method of claim 2, wherein the insecticide is thiamethoxam.

4. (amended) The method of any one of claims 1 to 3, wherein the at least one solvent is selected from the group consisting of lower alcohols, glycols and their derivatives, ethers, ketones, esters, sulfoxides, nitriles, pyrrolidones, glycerins and amides.

5. (amended) The method of any one of claims 1 to 4, wherein the at least one surfactant is selected from the group consisting of polyoxyalkylene hardened castor oils, polyoxyethylene alkyl ethers, polyoxyethylene polyoxypropylene alkyl ethers, polyoxyethylene sorbitan fatty acid esters, polyoxyethylene sorbitol fatty acid esters, polyglycerin fatty acid esters, sucrose fatty acid esters, polyoxyalkylene(poly)styrene phenols, polyoxyalkylene(poly)styrene cresols and their sulphate esters and phosphate esters and their salts.